

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (CURRENTLY AMENDED) An image data processing apparatus comprising:
 - a dividing unit that divides image data into a plurality of blocks;
 - an extracting unit that extracts pairs of blocks from the plurality of blocks and outputs a feature index of a first color component and a feature index of a second color component ~~in for~~ each of the paired blocks;
 - a registration unit that registers information about a correspondence between the feature index of the second color component and a change in the feature index for the first color component; and
 - a code embedding unit that embeds a predetermined code into the image data, by changing the feature index of the first color component based on the feature index of the second color component, using the information registered, and embeds one code corresponding to a ~~pair of the~~ paired blocks, based on a magnitude relationship between feature indices of color components related to the ~~pair of~~ paired blocks.
2. (CANCELLED)
3. (CURRENTLY AMENDED) The image data processing apparatus according to claim 1, wherein the registration unit registers information about a correspondence between the feature index of the second color component, a difference between the feature indices of the second color component related to a ~~pair of~~ paired blocks, and the change in the feature index for the first color component.
4. (ORIGINAL) The image data processing apparatus according to claim 1, wherein the first color component is a yellow component.
5. (ORIGINAL) The image data processing apparatus according to claim 4, wherein the second color component is a magenta component.

6. (ORIGINAL) The image data processing apparatus according to claim 1, further comprising a code extracting unit that extracts the code embedded into the image data.

7. (CURRENTLY AMENDED) An image data processing method comprising:
dividing image data into a plurality of blocks;
~~extracting pairs of blocks from the plurality of blocks and outputing a feature index of a first color component and a feature index of a second color component in for each of the paired blocks;~~
registering information about a correspondence between the feature index of the second color component and a change in the feature index for the first color component; and
embedding a predetermined code into the image data, by changing the feature index of the first color component based on the feature index of the second color component, using the information registered and embedding one code corresponding to ~~a pair of the paired blocks~~ based on a magnitude relationship between feature indices of the color components related to the ~~pair of paired~~ blocks.

8. (CANCELLED)

9. (CURRENTLY AMENDED) The image data processing method according to claim 7, wherein the registering includes registering information about a correspondence between the feature index of the second color component, a difference between the feature indices of the second color component related to ~~a pair of paired~~ blocks, and the change in the feature index for the first color component.

10. (ORIGINAL) The image data processing method according to claim 7, wherein the first color component is a yellow component.

11. (ORIGINAL) The image data processing method according to claim 10, wherein the second color component is a magenta component.

12. (ORIGINAL) The image data processing method according to claim 7, further comprising extracting the code embedded into the image data.

13. (CURRENTLY AMENDED) A computer-readable recording medium that stores a program that, when executed, makes a computer perform:

dividing image data into a plurality of blocks;

extracting pairs of blocks from the plurality of blocks and outputting a feature index of a first color component and a feature index of a second color component in each of the blocks;

registering information about a correspondence between the feature index of a second color component and a change in the feature index for the first color component; and

embedding a predetermined code into the image data, by changing the feature index of the first color component based on the feature index of the second color component, using the information registered and embedding one code corresponding to a pair of the paired blocks, based on a magnitude relationship between feature indices of the color components related to the pair of paired blocks.

14. (CANCELLED)

15. (CURRENTLY AMENDED) The computer-readable recording medium according to claim 13, the registering including registering information about a correspondence between the feature index of the second color component, a difference between the feature indices of the second color component related to a pair of paired blocks, and the change in the feature index for the first color component.

16. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 13, wherein the first color component is a yellow component.

17. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 16, wherein the second color component is a magenta component.

18. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 13, further making the computer perform extracting the code embedded into the image data.

19. (CURRENTLY AMENDED) An image data processing apparatus comprising:
a code embedding unit that embeds a predetermined code into image data by changing a feature index of a first color component of a block, based on a feature index of a second color

component of the block, and embeds a code corresponding to a pair of paired blocks, based on a magnitude relationship between feature indices of color components related to the pair of paired blocks.

20. (NEW) An image data processing method comprising:
pairing blocks of image data; and
embedding a code into each pair of the paired blocks based on a magnitude relationship between feature indices of color components related to the respective pair of the paired blocks.